

WHAT IS CLAIMED IS:

1. A writable area detection device for an optical recording/reproducing apparatus, comprising:

a waveform rectification unit for comparing an RF signal read from a user data area of a recording medium with a reference signal, and outputting a rectified pulse signal;

a pulse generation unit for generating a pulse signal based on the rectified pulse signal,

a latch unit for latching the pulse signal; and

a detection unit for detecting a writable area of the recording medium by using an output signal of the latch unit and the pulse signal.

2. A writable area detection device for an optical recording/reproducing apparatus, comprising:

a waveform rectification unit for comparing an RF signal read from a user data area of a recording medium with a reference signal, and outputting a rectified pulse signal;

a pulse generation unit for generating a first pulse signal and a second pulse signal based on the rectified pulse signal,

a latch unit for latching the second pulse signal based on the first pulse signal; and

a detection unit for detecting a writable area of the recording medium by using an output signal of the latch unit and the second pulse signal.

3. The writable area detection device as claimed in claim 2, the pulse generation unit further comprising:

a first signal generator for generating the first pulse signal by evenly dividing the rectified pulse signal; and

a second signal generator for generating the second pulse signal having its pulse width extended for an established clock period in synchronization with the first pulse signal.

4. The writable area detection device as claimed in claim 3, further comprising a system controller for controlling the first signal generator and the second signal generator in correspondence to operation states of the optical recording/reproducing apparatus.

5. The writable area detection device as claimed in claim 2, wherein the latch unit includes D flip-flops.

6. The writable area detection device as claimed in claim 2, wherein the detection unit includes AND gates.

7. The writable area detection device as claimed in claim 3, wherein the first signal generator is a frequency divider{,} and the second signal generator is a counter.

8. A writable area detection method for an optical recording/reproducing apparatus, comprising:

comparing an RF signal read from a user data area of a recording medium with a reference signal, and outputting a rectified pulse signal;

generating a pulse signal based on the rectified pulse signal;

latching the pulse signal; and

detecting a writable area of the user data of the recording medium by using an output signal of the latching and the pulse signal.

9. A writable area detection method for an optical recording/reproducing apparatus, comprising:

comparing an RF signal read from a user data area of a recording medium with a reference signal, and outputting a rectified pulse signal;

generating a first pulse signal and a second pulse signal based on the rectified pulse signal;

latching the second pulse signal based on the first pulse signal; and

detecting a writable area of the user data of the recording medium by using an output signal of the latching and the second pulse signal.

10. The writable area detection method as claimed in claim 9, the generating comprising:

generating the first pulse signal by evenly dividing the rectified pulse signal; and

generating the second pulse signal having the pulse width extended for an established clock period in synchronization with the first pulse signal.

11. The writable area detection method as claimed in claim 10, further comprising controlling the generating of the first pulse signal and the generating of the second pulse signal in correspondence to operation states of the optical recording/reproducing apparatus.

12. The writable area detection method as claimed in claim 9, wherein the latching is performed by D flip-flops.

13. The writable area detection method as claimed in claim 9, wherein the detecting logic-ANDs by an AND gate the output signal of the latching and the second pulse signal.

14. The writable area detection method as claimed in claim 10, wherein the generating of the first pulse signal is performed by a frequency divider, and the generating of the second pulse signal is performed by a counter.